REMARKS

Claims 20-33, 35-36 and 38-39 are pending in the present application. Claims 20, 35 and 38 have been amended. In claim 20, the definition of W has been amended and the term "optionally" has been deleted. Support for amended claim 20 can be found throughout the originally-filed specification, for example at page 7, lines 15-16 and page 21 lines 11-12. Claim 35 has been amended to recite a method of inhibiting binding of melanin concentrating hormone to a melanin concentrating hormone receptor and claim 38 has been amended to recite a method of treating obesity. Claims 34 and 37 have been cancelled. Applicants retain the right to pursue cancelled material in one or more related applications. New claim 39 has been added. Support for new claim 39 can be found throughout the originally-filed application, for example, at page 27, lines 15-20 and originally-filed claim 14. No new matter has been added to the application.

Priority

The Examiner has denied the above-referenced application the priority date of August 15, 2003 due to the lack of a certified translation of the priority document JP 2003-0207632. To remedy this, Applicants have enclosed a certified translation of the priority document. Applicants respectfully request that the Examiner grant the present application a priority date of August 15, 2003.

Claim Rejections Under 35 USC § 112, Second Paragraph

The Examiner has rejected claim 34 under 35 U.S.C. § 112, second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as one embodiment of the invention. Specifically, the Examiner states that claim 34 did not include resulting products. Though Applicants believe that one of ordinary skill of the art would be able to anticipate the resulting products from the description of claim 34, claim 34 has been cancelled and new claim 39 has been added to include the reaction schemes of claim 34 and the resulting products.

Support for new claim 39 can be found in originally-filed claim 14 and page 27, lines 15-20 of the originally-filed application. Applicants believe that the Examiner's rejection has been overcome and claim 39 is in condition for allowance.

Claim Rejections Under 35 USC § 112, First Paragraph

The Examiner has rejected claims 35-38 under 35 U.S.C. § 112, first paragraph as allegedly not being enabled by the specification. The Examiner states that the specification is enabling for inhibition of the melanin concentration hormone receptor but does not reasonably provide enablement for the treatment and prevention for all diseases mediated by the melanin concentrating hormone receptor.

Although Applicants disagree with the Examiner, in order to facilitate prosecution of this application, claim 35 has been amended to recite "a method of inhibiting binding of melanin concentrating hormone to a melanin concentrating hormone receptor comprising administering to a patient a therapeutically effective amount of a melanin concentrating hormone receptor antagonist compound according to Claim 20, or a pharmaceutically acceptable salt thereof."

As the Examiner has stated, the specification is enabling for inhibition of binding of melanin concentrating hormone to melanin concentrating hormone receptors. Support for amended claim 35 can be found at page 38 of the originally-filed specification.

Claim 36 is directed to a pharmaceutical composition comprising a compound according to claim 20, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier. Claim 36 does not refer to any methods of treatment or methods of prevention. Applicants believe claim 36 is enabled by the specification, for example at page 40, line 14 to page 42, line 6.

Claim 37 has been cancelled and therefore renders the Examiner's rejection moot.

Claim 38 has been amended to delete the term "preventing" and now recites, "a method of treating obesity in a patient in need thereof comprising administering to said patient a therapeutically-effective amount of a compound according to claim 20, or a pharmaceutically acceptable salt thereof."

Under the Wands factors of: breath of the claims, nature of the invention, state of the prior art, level or one of ordinary skill, level of predictability in the art, and the amount of direction provided by the inventor, claim 38 is enabled by the specification.

The Nature of the Invention: The embodiment claimed in claim 38 is directed to methods of treating obesity in a patient in need thereof comprising administering to said patient a therapeutically effective amount of a compound according to Claim 20, or a pharmaceutically acceptable salt thereof.

The State of the Prior Art: As discussed in the background section of the specification, at the time of the filing of the application it was known that MCH precursor gene-deficient mice showed reduced food ingestion or an increase in oxygen consumption per body weight compared to wild

type mice. Lower body weights, due to decrease in body fat, of MCH precursor gene-deficient mice was observed [Nature, Vol. 396, 670 (1998)]. On the contrary, transgenic mice which express excessive MCH precursor, developed obesity accompanied by polyphagy and insulin resistance [The Journal of Clinical Investigation, Vol. 107, 379 (2001)].

The pharmacological action observed on rodents is induced mainly via MCH-1R [Genomics, Vol. 79, 785(2002)]. Because MCH-1R gene-deficient mice chronically administered with MCH do not develop polyphagy or obesity, it is known that controlling of energy exchange by MCH is induced via MCH-1R. Furthermore, deficiency of MCH-1R promotes activity in mice [Proceedings of the National Academy of Sciences of the United States of America, Vol. 99, 3240 (2002)].

The predictability in the art: Though the unpredictability in the chemistry art is high, the Applicants have provided data in the specification that some of the compounds of claimed genius of claim 20 potently inhibit binding of MCH-1R.

Amount of guidance/working examples: As the Examiner states Applicants provide examples of the compounds inhibition of MCH binding to MCH-R1, for example the compound of example 17 dose-dependently inhibited increase in the amount of feed intake, as shown and taught in Fig 1, and page 39 of the description. This, in addition to the guidance throughout the specification on how to make and use the compounds and the state of the art relating inhibition of MCH binding to MCH R1 and weight loss, is sufficient to enable a person of ordinary skill in the art.

Breadth of the claims: The breadth of the claims is drawn to methods of treating obesity in a patient in need thereof comprising administering to said patient a therapeutically effective amount of a compound according to claim 20, or a pharmaceutically acceptable salt thereof.

The quantity of undue experimentation needed: Any additional experimentation needed to practice the embodiments recited in the claims would not be undue and is routine.

The level of skill in the art: Applicants agree with the Examiner that the level of skill in the art is high.

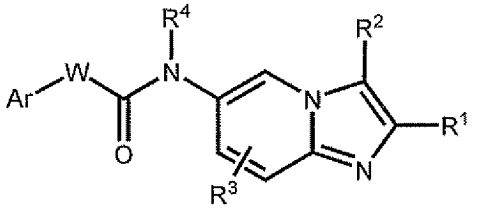
Taking consideration of the Wands factors, claim 38 of the present application is enabled. Thus, Applicants believe that claims 35-38 overcome the Examiner's rejections and 35, 36 and 38 are in condition for allowance. Claim 37, as mentioned above, has been cancelled and Applicants retain the right to pursue any cancelled material in one or more related applications.

Claim Rejections Under 35 USC § 102

Claims 20-21, 23, 25-28 and 30 are Novel in View of Takahashi et al., Yakugaku Zasshi, 69, 496-7 (1949) ("Takahashi")

The Examiner has rejected claims 20-21, 23, 25-28 and 30 under 35 U.S.C. § 102(b) as being allegedly anticipated by Takahashi et al., Yakugaku Zasshi, 69, 496-7 (1949) ("Takahashi"). Applicants disagree.

Claim 20 recites a compound of formula [I]

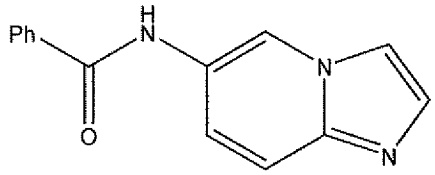


[I]

,

wherein R^1 and R^2 are not hydrogen at the same time.

Takahashi discloses the following compound:

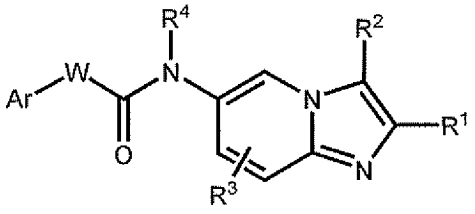


The compound disclosed in Takahashi does not anticipate claim 20, since claim 20 recites that R^1 and R^2 are not hydrogen at the same time. Thus, Takahashi does not anticipate claim 20. Claims 21, 23, 25-28 and 30 depend from claim 20 and therefore include all the elements of claim 20. Thus, Takahashi does not anticipate claims 21, 23, 25-28 and 30.

Claims 20-21, 23, 25, 27-28 and 30 are Novel in View of Fisher et al., Journal of Medicinal Chemistry, 15(9), 982-5, (1972) ("Fisher")

The Examiner has rejected claims 20-21, 23, 25, 27-28 and 30 under 35 U.S.C. § 102(b) as being allegedly anticipated by Fisher et al., Journal of Medicinal Chemistry, 15(9), 982-5, (1972) ("Fisher"). Applicants disagree.

Claim 20 recites a compound of formula [I]

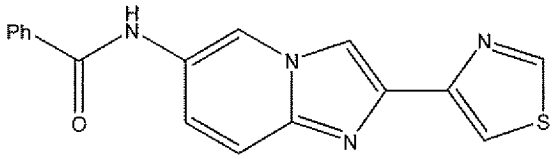


[I]

,

wherein Ar is an R^7-substituted aromatic carbocyclic group or aromatic heterocyclic group, said aromatic carbocyclic group or aromatic heterocyclic group selected from the group consisting of: (1) phenyl, (2) naphthyl, (3) pyridinyl, (4) pyrimidinyl, (5) pyridazinyl, (6) pyrazyl, (7) pyrazole, (8) pyrrolyl, (9) imidazolyl, (10) triazolyl, (11) oxazolyl, (12) isoxazolyl, (13) oxadiazolyl, (14) thiazolyl, (15) isothiazolyl, (16) thiadiazolyl, and (17) tetrazolyl; wherein R^7 is selected from R^5.

Fisher discloses the following compound:

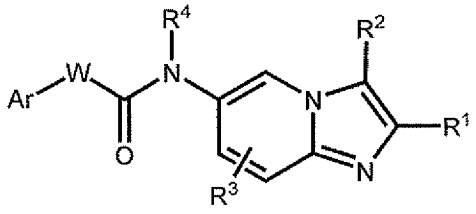


The compound disclosed in Fisher does not anticipate claim 20, since the phenyl in the compound disclosed in Fisher is unsubstituted and claim 20 requires Ar to be substituted with R^7, wherein R^7 is defined in claim 20. Thus, Fisher does not anticipate claim 20. Claims 21, 23, 25, 27-28 and 30 depend from claim 20 and therefore include all the elements of claim 20. Thus, Fisher does not anticipate claims 21, 23, 25, 27-28 and 30.

Claims 20-21, 23, 25, 27-28, 30 and 36 are Novel in View of United States Patent No. 3,701,780 to Fisher ("the '780 patent")

The Examiner has rejected claims 20-21, 23, 25, 27-28, 30 and 36 under 35 U.S.C. § 102(b) as being allegedly anticipated by United States Patent No. 3,701,780 to Fisher ("the '780 patent"). Applicants disagree.

Claim 20 recites a compound of formula [I]

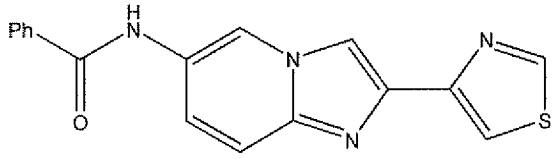


[I]

,

wherein Ar is an R^7-substituted aromatic carbocyclic group or aromatic heterocyclic group, said aromatic carbocyclic group or aromatic heterocyclic group selected from the group consisting of: (1) phenyl, (2) naphthyl, (3) pyridinyl, (4) pyrimidinyl, (5) pyridazinyl, (6) pyrazyl, (7) pyrazole, (8) pyrrolyl, (9) imidazolyl, (10) triazolyl, (11) oxazolyl, (12) isoxazolyl, (13) oxadiazolyl, (14) thiazolyl, (15) isothiazolyl, (16) thiadiazolyl, and (17) tetrazolyl; wherein R^7 is selected from R^5.

The '780 patent discloses the following compound:

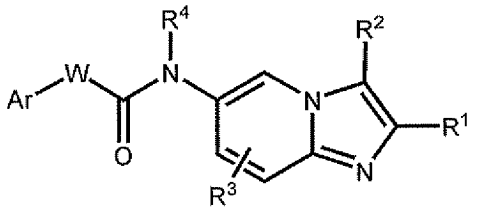


The compound disclosed in the '780 patent does not anticipate claim 20, since the phenyl in the compound disclosed in '780 patent is unsubstituted and claim 20 requires Ar to be substituted with R^7, wherein R^7 is defined in claim 20. Thus, the '780 patent does not anticipate claim 20. Claims 21, 23, 25, 27-28, 30 and 36 depend from claim 20 and therefore include all the elements of claim 20. Thus, the '780 Patent does not anticipate claims 21, 23, 25, 27-28, 30 and 36.

Claims 20-21, 23, 25-28 and 30 are Novel in View of Sundberg et al., Chemical Research in Toxicology, 6(4), 506-10 (1993) ("Sundberg")

The Examiner has rejected claims 20-21, 23, 25-28 and 30 under 35 U.S.C. § 102(b) as being allegedly anticipated by Sundberg et al., Chemical Research in Toxicology, 6(4), 506-10 (1993) ("Sundberg"). Applicants disagree.

Claim 20 recites a compound of formula [I]

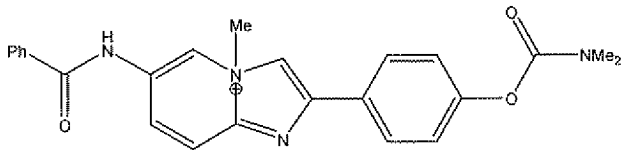


[I]

,

wherein Ar is an R^7-substituted aromatic carbocyclic group or aromatic heterocyclic group, said aromatic carbocyclic group or aromatic heterocyclic group selected from the group consisting of: (1) phenyl, (2) naphthyl, (3) pyridinyl, (4) pyrimidinyl, (5) pyridazinyl, (6) pyrazyl, (7) pyrazole, (8) pyrrolyl, (9) imidazolyl, (10) triazolyl, (11) oxazolyl, (12) isoxazolyl, (13) oxadiazolyl, (14) thiazolyl, (15) isothiazolyl, (16) thiadiazolyl, and (17) tetrazolyl; wherein R^7 is selected from R^5.

Sundberg discloses the following compound:

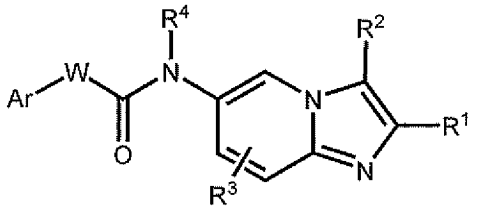


The compound disclosed in Sundberg does not anticipate claim 20, since the phenyl in the compound disclosed in Sundberg is unsubstituted and claim 20 requires Ar to be substituted with R^7, wherein R^7 is defined in claim 20. Thus, Sundberg does not anticipate claim 20. Claims 21, 23, 25-28 and 30 depend from claim 20 and therefore include all the elements of claim 20. Thus, Sundberg does not anticipate claims 21, 23, 25-28 and 30.

Claims 20-21, 23, 25, 27-28, 30 and 36 are Novel in View of PCT Application No. WO2001016103 to Albaugh et al. ("Albaugh")

The Examiner has rejected claims 20-21, 23, 25, 27-28, 30 and 36 under 35 U.S.C. § 102(b) as being allegedly anticipated by PCT Application No. WO2001016103 to Albaugh et al. ("Albaugh"). Applicants disagree.

Claim 20 recites a compound of formula [I]

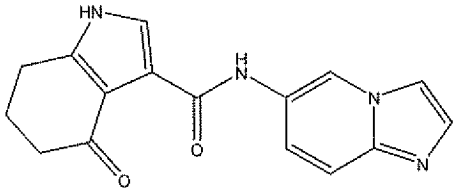


[I]

,

wherein R^1 and R^2 are not hydrogen at the same time.

Albaugh discloses the following compound:

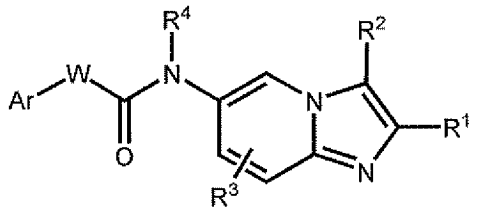


The compound disclosed in Albaugh does not anticipate claim 20, since claim 20 recites that R^1 and R^2 are not hydrogen at the same time. Thus, Albaugh does not anticipate claim 20. Claims 21, 23, 25, 27-28, 30 and 36 depend from claim 20 and therefore include all the elements of claim 20. Thus, Albaugh does not anticipate claims 21, 23, 25, 27-28, 30 and 36.

Claims 20-25, 27-28, 30 and 36 are Novel in View of PCT Application No. WO 2004007471 to Taniguchi et al. ("Taniguchi")

The Examiner has rejected claims 20-25, 27-28, 30 and 36 under 35 U.S.C. § 102(a, e) as being allegedly anticipated by PCT Application No. WO 2004007471 to Taniguchi et al. ("Taniguchi"). Applicants disagree.

Claim 20 recites a compound of formula [I]



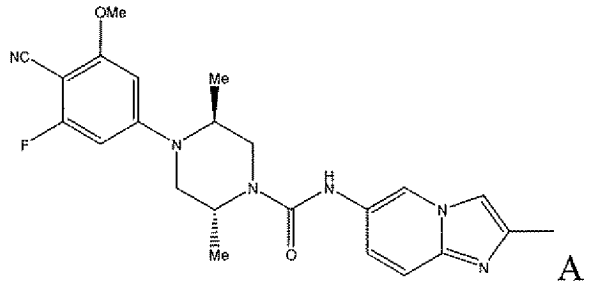
[I]

,

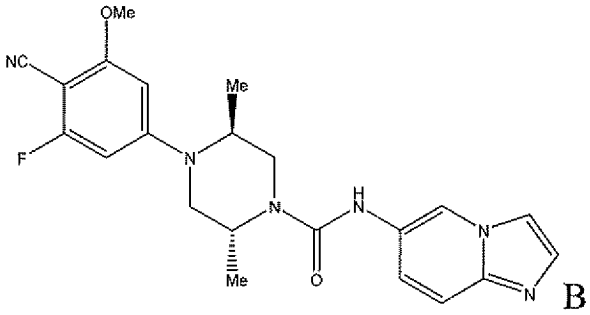
wherein R^1 and R^2 are not hydrogen at the same time and wherein Ar is an R^7-substituted aromatic carbocyclic group or aromatic heterocyclic group, said aromatic carbocyclic group or aromatic

heterocyclic group selected from the group consisting of: (1) phenyl, (2) naphthyl, (3) pyridinyl, (4) pyrimidinyl, (5) pyridazinyl, (6) pyrazyl, (7) pyrazole, (8) pyrrolyl, (9) imidazolyl, (10) triazolyl, (11) oxazolyl, (12) isoxazolyl, (13) oxadiazolyl, (14) thiazolyl, (15) isothiazolyl, (16) thiadiazolyl, and (17) tetrazolyl; wherein R^7 is selected from R^5.

Taniguchi discloses the following compounds:



A



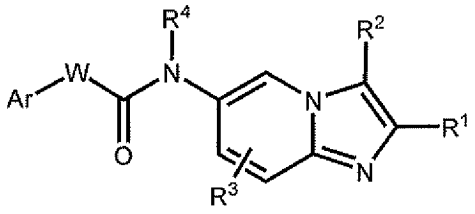
B

Compound A, disclosed in Taniguchi does not anticipate claim 20, since claim 20 recites that Ar is an R^7-substituted aromatic carbocyclic group or aromatic heterocyclic group and R^7 is not methyl. Compound B, disclosed in Taniguchi does not anticipate claim 20, since claim 20 recites that R^1 and R^2 are not hydrogen at the same time. Thus, Taniguchi does not anticipate claim 20. Claims 21-25, 27-28, 30 and 36 depend from claim 20 and therefore include all the elements of claim 20. Thus, Takahashi does not anticipate claims 21-25, 27-28, 30 and 36.

Claims 20-21, 23, 25, 27-28, 30 and 36 are Novel in View of United States Patent No. 7,109,351 to Albaugh et al. ("the '351 patent")

The Examiner has rejected claims 20-21, 23, 25, 27-28, 30 and 36 under 35 U.S.C. § 102(e) as being allegedly anticipated by United States Patent No. 7,109,351 to Albaugh et al. ("the '351 patent"). Applicants disagree.

Claim 20 recites a compound of formula [I]

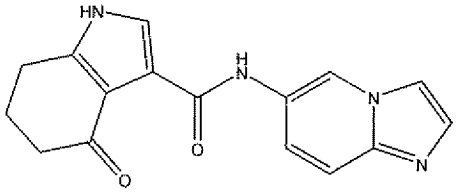


[I]

,

wherein R^1 and R^2 are not hydrogen at the same time.

Albaugh discloses the following compound:

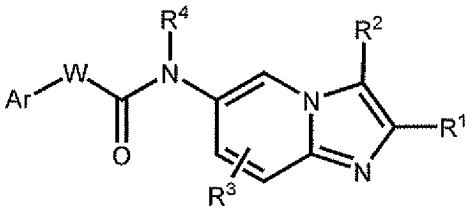


The compound disclosed in the '351 patent does not anticipate claim 20 since claim 20 recites that R^1 and R^2 are not hydrogen at the same time. Thus, the '351 patent does not anticipate claim 20. Claims 21, 23, 25, 2-28, 30 and 36 depend from claim 20 and therefore include all the elements of claim 20. Thus, the '351 patent does not anticipate claims 21, 23, 25, 27-28, 30 and 36.

Claim Rejections Under 35 USC § 103

The Examiner has rejected claims 22 and 24, which depend from claim 20, under 35 U.S.C. § 103(a) as being allegedly unpatentable in view of Takahashi et al., Yakugaku Zasshi, 69, 496-7 (1949) ("Takahashi"). Applicants disagree.

Claim 20 recites a compound of formula [I]



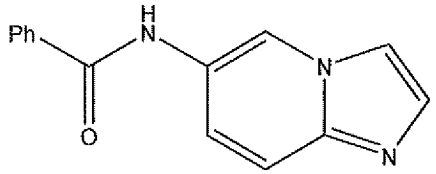
[I]

,

wherein Ar is an R^7-substituted aromatic carbocyclic group or aromatic heterocyclic group, said aromatic carbocyclic group or aromatic heterocyclic group selected from the group consisting of: (1) phenyl, (2) naphthyl, (3) pyridinyl, (4) pyrimidinyl, (5) pyridazinyl, (6) pyrazyl, (7) pyrazole, (8)

pyrrolyl, (9) imidazolyl, (10) triazolyl, (11) oxazolyl, (12) isoxazolyl, (13) oxadiazolyl, (14) thiazolyl, (15) isothiazolyl, (16) thiadiazolyl, and (17) tetrazolyl; wherein R^7 is selected from R^5.

Takahashi discloses the following compound:



The Examiner states that it would be obvious to replace an H with a methyl. Applicants disagree with the Examiner and would also like to bring to the Examiner's attention that the compound in Takahashi also suffers from another fatal flaw. The phenyl in Takahashi is unsubstituted, wherein the compounds of claim 20, Ar is substituted with R^7 and there is no teaching or suggestion in Takahashi to substitute the phenyl with any functional group let alone the ones in the R^7. Thus the compound disclosed in Takahashi does not render claim 20 unpatentable. Claims 22 and 24 depend from claim 20 and therefore include all the elements of claim 20. Thus, Takahashi does not render claims 22 and 24 unpatentable.

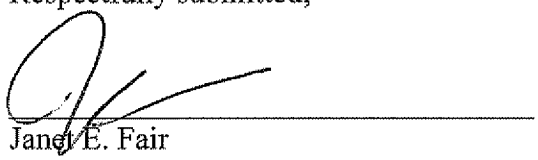
Allowable Subject Matter

Applicants thank the Examiner for pointing out that claims 29 and 31-33 contain allowable subject matter, which would be allowed if rewritten in independent form. Applicants believe that in light of the amendments and remarks above that all pending claims are in condition for allowance.

CONCLUSION

In light of the amendments and remarks above, Applicants believe that the present application is in condition for allowance.

Respectfully submitted,

By 

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Date October 14, 2008